

REMARKS

Please reconsider this application in view of the amendments and the remarks.

Applicant thanks the Examiner for carefully reviewing this application.

Priority under 35 U.S.C. § 119

Applicant notes that the claim for foreign priority was not acknowledged in the instant Office Action (*see* cover page of the Office Action, under heading “Priority under 35 U.S.C. § 119”). The present application is a National Stage application of PCT Application No. PCT/FR2003/03686. Applicant notes that in PCT applications, the International Bureau (IB) handles the submission of priority documents. If the documents were in fact received, acknowledgement of the claim for foreign priority is respectfully requested. If the IB has not yet forwarded the priority document, Applicant respectfully requests that the USPTO request the same from the IB (*see* MPEP § 1828).

Disposition of the claims

Claims 1-22 are pending. Claims 1 and 20 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 20.

Claim Amendments

Independent claim 1 and dependent claim 14 are amended by this reply to clarify aspects of the invention. No new matter is added by way of these amendments, as support is found, for example, at least in paragraphs [0014], [0049], and [0070] of the publication of the present application.

Claim Objections

Claims 16-22 are objected to for failing to delineate the acronym VCSEL at least the first time it is used in the claims. An appropriate correction has been made to claim 16. Accordingly, withdrawal of this objection is respectfully requested.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. No. 7,130,115 (“Olszak”) in view of U.S. Publ. No. 2001/0046712 (“Hang”). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed as follows.

MPEP § 2143 states that “[t]he key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit.” Further, when combining prior art elements, the Examiner “must articulate the following: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference....” MPEP § 2143(A).

The independent claims require, in part, an optical head that is miniature, *i.e.*, less than or equal to 3 mm in diameter and total length of approximately 30 mm, as recited by amended independent claim 1. Applicants assert that Olszak fails to disclose or render obvious the aforementioned limitation of the independent claims.

Specifically, Olszak is directed to array microscopy. Single axis imaging systems, such as that of the claimed invention, are mentioned only in passing (*see* Olszak, col., 4, ll. 3). The

lack of description of a single axis system means that such an embodiment is not well covered by Olszak application. Furthermore, Olszak discloses "...typically a tissue specimen is mounted on the microscope slide in thin section but the array may be used to image any object" (see Olszak, col. 4, line 24). Thus, the object in Olszak (*i.e.*, a tissue sample or some other specimen being observed) has to be located on a microscope slide, meaning that it's observed in a bench top configuration. The purpose of this microscope is clearly *in vitro* imaging. This is in contrast to the claimed invention, which is *in vivo* imaging (*i.e.*, observation within a living organism). Accordingly, the focus, and therefore the purpose of Olszak and the claimed invention are totally distinct. *In vitro* vs. *in vivo* imaging also requires the use of different equipment, different sizes of instruments, etc. Accordingly, the claimed invention has been focused to specify the miniature aspect of the optical head by indicating its diameter and length specifications. See published specification, paragraphs [0014] and [0049].

As is clearly described in Olszak, Olszak's field of view (FOV) is typically several cm which is definitely not compatible with a miniaturized system usable within an endoscope, as required by the amended independent claims. In fact, Olszak explicitly discloses "...for scanning the 20mm width for a standard microscope slide..." (see Olszak, col. 5, line 52), which does not define a miniature system as claimed. Furthermore, the scanning system used for visualizing such a wide FOV as described in Olszak cannot be the same as one dedicated to several hundreds of microns as ours. Moreover, there is no specific description of the size of the system, particularly its level of miniaturization, in Olszak. Accordingly, Olszak clearly fails to disclose or render obvious an optical head for *in vivo* imaging that is equal to or less than 3 mm in diameter and having a length of approximately 30 mm.

Further, Hang fails to supply that which Olszak lacks. Specifically, Hang is not relevant as it deals with fluorescence imaging with a rotatable system dedicated to biochip reading. Nothing related to a miniaturized system is disclosed in Hang. Even assuming *arguendo* that Hang discloses the fibered aspect of the claimed invention, one of ordinary skill would not be able to achieve the claimed invention by adding the scanning system described in Olszak to the fibres disclosed in Hang. Microscope size, needed FOV, and scanning performance, among other things, will not be the same as the claimed invention when combining the systems of Olszak and Hang.

In view of the above, it is clear that the Examiner's contentions fail to support an obviousness rejection of the independent claims. Pending dependent claims are patentable for at least the same reasons.

Further, Applicants assert that dependent claim 14 is separately patentable over Olszak and Hang, whether taken together or in combination. Specifically, neither Olszak nor Hang disclose or render obvious an optical fibre configured to bring the optical head closer to the field of view (FOV) such that a distance between the two is within several tens of microns. See, *e.g.*, published specification, paragraph [0070]. In fact, Olszak does not even describe an optical fibre. Thus, dependent claim 14, as amended, is patentable over the cited prior art for at least this additional reason.

Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed

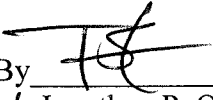
Application No.: 10/539,519

Docket No.: 17452/016001

below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17452/016001).

Dated: October 8, 2010

Respectfully submitted,

By  #45,079
Jonathan P. Osha *THOMAS S. KLEINER*
Registration No.: 33,986
OSHA · LIANG LLP
Two Houston Center
909 Fannin Street, Suite 3500
Houston, Texas 77010
(713) 228-8600
(713) 228-8778 (Fax)
Attorney for Applicant(s)